Advanced Super Hornet

Description and Purpose:

The Advanced Super Hornet offers domestic and international customers a menu of next-generation capabilities, allowing Super Hornets to outpace threats in the 2030+ anti-access, area-denial (A2/AD) environment – affordably. The capabilities can be retrofitted onto existing Block II Super Hornets or can be included on new build aircraft. The modular approach offers customers an affordable, low-risk option as they select the capabilities needed for their future mission and cost requirements.

Advanced options include:

- Signature Enhancements
- Conformal Fuel Tanks (CFTs)
- Enclosed Weapons Pod (EWP)
- Enhanced Engine
- Next Generation Cockpit
- Internal Infrared Search and Track (IRST)

The advanced capabilities are designed to outpace threats in the 2030+ A2/AD environment, providing the following benefits to the warfighter:

- Longer range with low-drag, stealthy conformal fuel tanks
- Low observability with enclosed weapons pod and next-generation radar cross section reduction
- Control of off-board assets and improved target identification
- Long-range detection of adversary stealth aircraft with internal IRST
- Significant acceleration increase with enhanced engine
- Advanced information fusion through multi-source integration for information superiority
- Enhanced situational awareness with next-generation cockpit

Advanced Super Hornet Test Flights

In August 2013, Boeing and Northrop Grumman flew an Advanced Super Hornet configured with CFTs, an EWP and signature enhancements. The first flight was on
Aug. 5, 2013. In total, there are 21 flights (accumulating 31 flight hours) planned at both the Boeing St. Louis site and Naval Air Station Patuxent River, Md.

The form-fit CFTs and EWP are configured to collect necessary flight and signature data needed to validate projected performance data.

The flights confirmed predictions that the Advanced Super Hornet will be able to address threats in a 2030+ A2/AD environment. The following findings resulted from the test flights:

- The CFTs increase the Block II Super Hornet’s combat radius by up to 130 nautical miles for a total combat radius of more than 700 nautical miles.
- The signature enhancements showed a 50 percent signature reduction over the current U.S. Navy specification for stealth on the Block II Super Hornet
- The CFTs and EWP are modular in design allowing for flexibility in first day of the war versus second day of the war operations and beyond mission requirements
- The enhanced capabilities can be retrofitted to existing Block II Super Hornets or forward fitted on new build aircraft
- The CFTs will contain 3,500 pounds of fuel in a more aerodynamic configuration than under-wing tanks, offering more range through efficiency and more flexibility in stores configuration
- The EWP allows the aircraft to operate in a cleaner configuration while carrying a lethal mission load of up to 2,500 pounds in a stealthy pod

Like the Super Hornet, the Growler offers a modular design that allows it to be quickly outfitted or adjusted with evolving capabilities as defined by mission requirements.

The Hornet Industry Team

The Hornet Industry Team (HIT), comprised of Boeing, Northrop Grumman, GE Aviation and Raytheon, continues to invest in these future capabilities to ensure the Super Hornet continues to evolve to outpace advanced threats. The world’s most experienced tactical aircraft provider, the HIT employs more than 100,000 people in 46 states with more than 1400 suppliers. They have a reputation of delivering quality aircraft on time and on schedule – all while adding capabilities to the aircraft in an efficient and cost-effective manner.

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